Mikhail Ovchinnikov

List of Publications by Year in Descending Order

46 papers	2,017 citations	23 h-index	44 g-index
50 ext. papers	2,257 ext. citations	5.1 avg, IF	4.29 L-index

#	Paper	IF	Citations
46	Mesoscale Convective Systems in a Superparameterized E3SM Simulation at High Resolution. *Journal of Advances in Modeling Earth Systems*, **2022**, 14,	7.1	1
45	Formulation of Autoconversion and Drop Spectra Shape in Shallow Cumulus Clouds. *Journals of the Atmospheric Sciences*, **2020**, 77, 711-722	2.1	3
44	Scaling of an Atmospheric Model to Simulate Turbulence and Cloud Microphysics in the Pi Chamber. *Journal of Advances in Modeling Earth Systems*, **2019**, 11, 1981-1994	7.1	10
43	Dependence of Vertical Alignment of Cloud and Precipitation Properties on Their Effective Fall Speeds. *Journal of Geophysical Research D: Atmospheres*, **2019**, 124, 2079-2093	4.4	4
42	Development and Evaluation of an Explicit Treatment of Aerosol Processes at Cloud Scale Within a Multi-Scale Modeling Framework (MMF). *Journal of Advances in Modeling Earth Systems*, **2018**, 10, 1663-1679	7.1	1
41	Low-Cloud Feedback in CAM5-CLUBB: Physical Mechanisms and Parameter Sensitivity Analysis. *Journal of Advances in Modeling Earth Systems*, **2018**, 10, 2844-2864	7.1	10
40	A PDF-Based Parameterization of Subgrid-Scale Hydrometeor Transport in Deep Convection. *Journals of the Atmospheric Sciences*, **2017**, 74, 1293-1309	2.1	2
39	Characterization of cumulus cloud fields using trajectories in the center of gravity versus water mass phase space: 1. Cloud tracking and phase space description. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 6336-6355	4.4	20
38	Characterization of cumulus cloud fields using trajectories in the center of gravity versus water mass phase space: 2. Aerosol effects on warm convective clouds. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 6356-6373	4.4	25
37	Aerosol indirect effect from turbulence-induced broadening of cloud-droplet size distributions. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 14243-14248	11.5	64
36	Vertical overlap of probability density functions of cloud and precipitation hydrometeors. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 12,966-12,984	4.4	3
35	Evaluation of Subgrid-Scale Hydrometeor Transport Schemes Using a High-Resolution Cloud-Resolving Model. *Journals of the Atmospheric Sciences*, **2015**, 72, 3715-3731	2.1	4
34	A multiscale modeling framework model (superparameterized CAM5) with a higher-order turbulence closure: Model description and low-cloud simulations. *Journal of Advances in Modeling Earth Systems*, **2015**, 7, 484-509	7.1	31
33	Parametric behaviors of CLUBB in simulations of low clouds in the Community Atmosphere Model (CAM). *Journal of Advances in Modeling Earth Systems*, **2015**, 7, 1005-1025	7.1	24
32	Airborne Aerosol in Situ Measurements during TCAP: A Closure Study of Total Scattering. *Atmosphere*, **2015**, 6, 1069-1101	2.7	14
31	Long-lifetime ice particles in mixed-phase stratiform clouds: Quasi-steady and recycled growth. *Journal of Geophysical Research D: Atmospheres*, **2015**, 120, 11,617-11,635	4.4	10
30	Microphysical consequences of the spatial distribution of ice nucleation in mixed-phase stratiform clouds. *Geophysical Research Letters*, **2014**, 41, 5280-5287	4.9	7

29	Intercomparison of large-eddy simulations of Arctic mixed-phase clouds: Importance of ice size distribution assumptions. *Journal of Advances in Modeling Earth Systems*, **2014**, 6, 223-248	7.1	88
28	A sensitivity analysis of cloud properties to CLUBB parameters in the single-column Community Atmosphere Model (SCAM5). *Journal of Advances in Modeling Earth Systems*, **2014**, 6, 829-858	7.1	37
27	Minimalist model of ice microphysics in mixed-phase stratiform clouds. *Geophysical Research Letters* , **2013**, 40, 3756-3760	4.9	23
26	Reexamination of the State of the Art of Cloud Modeling Shows Real Improvements. *Bulletin of the American Meteorological Society*, **2013**, 94, ES45-ES48	6.1	15
25	Untangling dynamical and microphysical controls for the structure of stratocumulus. *Geophysical Research Letters*, **2013**, 40, 4432-4436	4.9	13
24	The mechanism of first raindrops formation in deep convective clouds. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 9123-9140	4.4	50
23	Markovian approach and its applications in a cloudy atmosphere **2013**, 69-107		
22	Constraining cloud lifetime effects of aerosols using A-Train satellite observations. *Geophysical Research Letters*, **2012**, 39,	4.9	106
21	Aerosol optical depth increase in partly cloudy conditions. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		56
20	PDF Parameterization of Boundary Layer Clouds in Models with Horizontal Grid Spacings from 2 to 16 km. *Monthly Weather Review*, **2012**, 140, 285-306	2.4	66
19	Laboratory measurements and model sensitivity studies of dust deposition ice nucleation. *Atmospheric Chemistry and Physics*, **2012**, 12, 7295-7308	6.8	45
18	Representation of Arctic mixed-phase clouds and the Wegener-Bergeron-Findeisen process in climate models: Perspectives from a cloud-resolving study. *Journal of Geophysical Research*, **2011**, 116,		53
17	Parameterizing correlations between hydrometeor species in mixed-phase Arctic clouds. *Journal of Geophysical Research*, **2011**, 116,		8
16	Effects of ice number concentration on dynamics of a shallow mixed-phase stratiform cloud. *Journal of Geophysical Research*, **2011**, 116,		36
15	Intercomparison of cloud model simulations of Arctic mixed-phase boundary layer clouds observed during SHEBA/FIRE-ACE. *Journal of Advances in Modeling Earth Systems*, **2011**, 3, n/a-n/a	7.1	79
14	Aerosol indirect effects in a multi-scale aerosol-climate model PNNL-MMF. *Atmospheric Chemistry and Physics*, **2011**, 11, 5431-5455	6.8	123
13	Droplet nucleation: Physically-based parameterizations and comparative evaluation. *Journal of Advances in Modeling Earth Systems*, **2011**, 3,	7.1	90
12	Indirect and Semi-direct Aerosol Campaign. *Bulletin of the American Meteorological Society*, **2011**, 92, 183-201	6.1	202

11	Aerosol retrievals under partly cloudy conditions: challenges and perspectives. *NATO Science for Peace and Security Series C: Environmental Security*, **2011**, 205-232	0.3	2
10	The cloud condensation nuclei and ice nuclei effects on tropical anvil characteristics and water vapor of the tropical tropopause layer. *Environmental Research Letters*, **2010**, 5, 044005	6.2	46
9	Retrieval of aerosol optical depth in vicinity of broken clouds from reflectance ratios: case study. *Atmospheric Measurement Techniques*, **2010**, 3, 1333-1349	4	10
8	Tropical anvil characteristics and water vapor of the tropical tropopause layer: Impact of heterogeneous and homogeneous freezing parameterizations. *Journal of Geophysical Research*, **2010**, 115,		27
7	Modeling aerosol growth by aqueous chemistry in a nonprecipitating stratiform cloud. *Journal of Geophysical Research*, **2010**, 115,		12
6	In situ characterization of cloud condensation nuclei, interstitial, and background particles using the single particle mass spectrometer, SPLAT II. *Analytical Chemistry*, **2010**, 82, 7943-51	7.8	55
5	Nonlinear Advection Algorithms Applied to Interrelated Tracers: Errors and Implications for Modeling Aerosol–Cloud Interactions. *Monthly Weather Review*, **2009**, 137, 632-644	2.4	25
4	Retrieval of aerosol optical depth in vicinity of broken clouds from reflectance ratios: Sensitivity study. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2009**, 110, 1677-1689	2.1	18
3	Dominant role by vertical wind shear in regulating aerosol effects on deep convective clouds. *Journal of Geophysical Research*, **2009**, 114,		216
2	Stochastic radiative transfer in multilayer broken clouds. Part II: validation tests. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2003**, 77, 395-416	2.1	8
1	Notes on the state-of-the-art numerical modeling of cloud microphysics. *Atmospheric Research*, **2000**, 55, 159-224	5.4	274